

**[4366]- 403**  
**SYMCA (Engg. Faculty)**  
**OBJECT ORIENTED ANALYSIS AND DESIGN**  
**(Semester - IV) (2008 Pattern) (610911)**  
**MAY/JUNE 2013 EXAMINATIONS**

**Time: 3 Hours]**

**[Max. Marks : 70**

**Instructions to the candidates:**

- 1) Answers to the two sections should be written in separate answer books.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume Suitable data if necessary.

**SECTION I**

- Q1) a) Explain in brief new features of UML 2.0 [5]  
 b) Write short note on Model Driven Architecture. [6]
- OR**
- Q2) a) Explain the design view in 4 + 1 view architecture. [5]  
 b) Explain in brief the phases of Rational Unified Process. [6]
- Q3) a) What is "Extensibility mechanism in UML"? Explain with example. [6]  
 b) What is OCL? Explain with example. [6]
- OR**
- Q4) a) Which are the various behavioral diagrams in UML 2.0? Explain role of each diagram in brief. [6]  
 b) Explain the benefits of using UML. [6]
- Q5) a) Explain aggregation and composition with example. [5]  
 b) The university is in the process of uploading and updating the PhD guide list. [7]  
 The guide uploads his academic details; the guide selects his stream (i.e. engineering, management etc.). He also has to select the research centre where he is associated or wants to associates. If the guide has vacancy, he can select the students from available waiting list at research centre. The guide can select maximum up to 8 PhD candidates and 4 M.Phil candidates. Draw use case diagram for this process.
- OR**
- Q6) a) Draw Class diagram for a "Library Management System". Make necessary assumptions. [6]  
 b) Explain the Composite structure diagram with example. [6]

## SECTION II

- Q7) a) Draw sequence diagram for withdrawing money functionality from ATM. Make suitable assumptions and scope. [7]  
b) Explain with example interaction overview diagram. [4]  
**OR**
- Q8) a) Explain different combined fragments used in sequence diagram with example. [5]  
b) Explain communication diagram with suitable example. [6]
- Q9) a) Draw timing diagram for fully automated washing machine, assuming that washing machine has entire cycle of 40 minutes, of which it takes 5 minute time for soaking. Next 15 minutes for washing then 15 minutes for rinsing and last 5 minutes for spinning. [6]  
b) Explain partitions in activity diagram with suitable example. [6]  
**OR**
- Q10) a) Explain states in state machine diagram with example. [5]  
b) Draw activity diagram for DTE's MCA admission procedure. Write assumptions and appropriate scope. [7]
- Q11) a) Draw deployment diagram for web application – online ordering of book. Write your assumptions clearly. [6]  
b) Describe UML web applications. [6]  
**OR**
- Q12) a) What is the use of package diagram? Explain with example. [6]  
b) Draw component diagram for "Online Airline Reservation System". [6]